CENTRAL MACHINERY®

TIRE CHANGE

SEMI-AUTOMATIC WITH SWINGING ARM

Model 90589

ASSEMBLY AND OPERATING INSTRUCTIONS

Visit our website at: http://www.harborfreight.com

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

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For technical questions or replacement parts, please call 1-800-444-3353.

Revised Manual 10g

PRODUCT SPECIFICATIONS

Electrical Requirements	220 V / 60 Hz / 10 A
Motor	1 HP / 1740 RPM
Maximum Tire Diameter	39”
Maximum Tire Width	13”
External Locking Rim Dimensions	10”-18”
Internal Locking Rim Dimensions	12”-20”
Maximum PSI Working Pressure	110 PSI
Bead Break Force	5,500 lb.
Maximum Rotation Torque (Turntable)	795 ft-lb
Air Inlet Fitting Size	1/4”-18 NPT
Weight	566 lb

SAVE THIS MANUAL

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

GENERAL SAFETY RULES

WARNING! Read all instructions
Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury. The term “power tool” in all of the warnings listed below refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

SAVE THESE INSTRUCTIONS

WORK AREA

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.

2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.

3. **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control. Protect others in the work area from debris such as chips and sparks. Provide barriers or shields as needed.

ELECTRICAL SAFETY

1. **Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.** If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.

2. **Double insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.** Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.

3. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators.** There is an increased risk of electric shock if your body is grounded.

4. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.

5. **Do not abuse the Power Cord. Never use the Power Cord to carry the tools or pull the Plug from an outlet. Keep the Power Cord away from heat, oil, sharp edges, or moving parts. Replace damaged Power Cords immediately.** Damaged Power Cords increase the risk of electric shock.

PERSONAL SAFETY

1. **Stay alert. Watch what you are doing, and use common sense when operating a power tool. Do not use a power tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.

2. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.

3. **Avoid accidental starting. Be sure the Power Switch is off before plugging in.** Plugging in power tools with the Power Switch on, invites accidents.

4. **Remove adjusting keys or wrenches before turning the power tool on.** A wrench or a key that is left attached to a rotating part of the power tool may result in personal injury.

5. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the power tool in unexpected situations.

6. **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

TOOL USE AND CARE

1. **Do not force the tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.

2. **Do not use the power tool if the Power Switch does not turn it on or off.** Any tool that cannot be controlled with the Power Switch is dangerous and must be replaced.

3. **Disconnect the Power Cord Plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.

4. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.

5. **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with a sharp cutting edge are less likely to bind and are easier to control. Do not use a damaged tool. Tag damaged tools “Do not use” until repaired.

6. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool’s operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.

7. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may become hazardous when used on another tool.

SERVICE

1. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.

2. **When servicing a tool, use only identical replacement parts. Follow instructions in the *“Inspection, Maintenance, And Cleaning”* section of this manual.** Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

SPECIFIC SAFETY RULES

1. **Maintain a safe working environment.** Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use this product in areas near flammable chemicals, dusts, and vapors.

2. **Maintain labels and nameplates on the Tire Changer.** These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.

3. **Use eye and hearing protection.** Always wear ANSI approved safety impact eye goggles and hearing protectors when using this product.

4. **Do not allow children to use or play with this product.**

5. **Store idle equipment.** When not in use, tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment, and keep out of reach of children.

6. **Do not use this product if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this product.

7. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Wear restrictive hair covering to contain long hair. Wear heavy duty gloves when handling tires, but be careful to keep gloves away from all moving parts of the Tire Changer.

8. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.

9. **Industrial applications must follow OSHA requirements.**

10. **Maintain this product with care.** Keep this product clean for better and safer performance.

11. **Maintenance:** For your safety, service and maintenance should be performed regularly by a qualified technician.

12. **Check for damaged parts.** Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace or repair damaged or worn parts immediately.

13. **Replacement parts and accessories:** When servicing, use only identical replacement parts. Only use accessories intended for use with this product.

14. **Use the right tool or attachment for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool or attachment. There

are certain applications for which this product was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this product, and do not use this product for a purpose for which it was not intended.

15. **WARNING:** The Tire Changer requires the assembly of a UL, CSA, or CE listed, 220 Volt, 3-Prong Electrical Plug (not provided) onto the unit's electrical power cord. The National Electric Code requires that the GREEN wire on the unit must be used as the GROUND wire. The "HOT" wires on the power cord are the BLACK and WHITE wires. Do not attempt to alter the 220 Volt, 3-Prong Plug or its assembly to the power cord (as mentioned above) in any way. In addition, it is recommended that this assembly procedure be carried out by a qualified electrician.

16. **CAUTION!** Prior to performing any services or maintenance on the Tire Changer, always disconnect the Tire Changer from its air supply source. Pump the Bead Breaker Pedal several times to evacuate all compressed air from the machine, and disconnect the unit from its electrical supply source.

17. **Use only clean, dry, regulated, compressed air at up to 110 PSI (8-BAR).** Never use oxygen, carbon dioxide, combustible gases, or any other bottled gas as a power source for this machine.

18. **EXPLOSION DANGER! Never overinflate tires or other inflatable items. When inflating a tire with compressed air, make sure to inflate the tire to the exact PSI as recommended by the tire manufacturer.** Always observe Pressure Gauge of Tire Changer to check the actual pressure in tires.

19. **To avoid personal injury and/or machine damage, always make sure the tire rim is firmly secured on the Tire Changer with its Jaws.**

20. **Never place your hands or fingers between the vehicle wheel rim and the Jaws of the Tire Changer during the locking/clamping stage.**

21. **Dispose of old tires in accordance with local, state, and federal laws.**

22. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.

23. **WARNING!** The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

UNPACKING

When unpacking, check to make sure all the parts shown on the **Parts Lists near the end of this manual** are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

ASSEMBLY INSTRUCTIONS

Note: For additional information regarding the parts mentioned in the following pages, refer to the **Assembly Diagrams near the end of this manual.**

1. With assistance and a proper lifting device, carefully move the Tire Changer to the desired workplace location. Make sure to position the Tire Changer on a flat, level, dry, floor surface capable of bearing the weight of the Tire Changer, operator, additional tools, tires, etc.

2. Using the four mounting holes located at the Tire Changer's base as a template, mark the spots where four 3/8" diameter mounting holes will be drilled in the floor surface. Then, temporarily set the Tire Changer aside.

3. Drill the four, pre-marked, 3/8" holes in the floor surface (about 4" deep). Then, insert a 3/8" expansion plug (not included) in each of the four holes.

4. Move the Tire Changer back to its original position, making sure to align its four mounting holes with the four pre-drilled holes in the floor surface. Once the holes are aligned and the Tire Changer is level, insert four 3/8" bolts (not included) through the mounting holes and into the expansion plugs. Secure the Tire Changer to the floor surface by tightening the four 3/8" bolts.

5. Prior to assembling and using the Tire Changer, it is recommended that you familiarize yourself with the main components of the unit. **(See Figure A.)**

6. **NOTE: Prior to beginning the assembly procedures, make sure to remove all the additional parts and accessories from the *shipping boxes* that are included with the Tire Changer.**

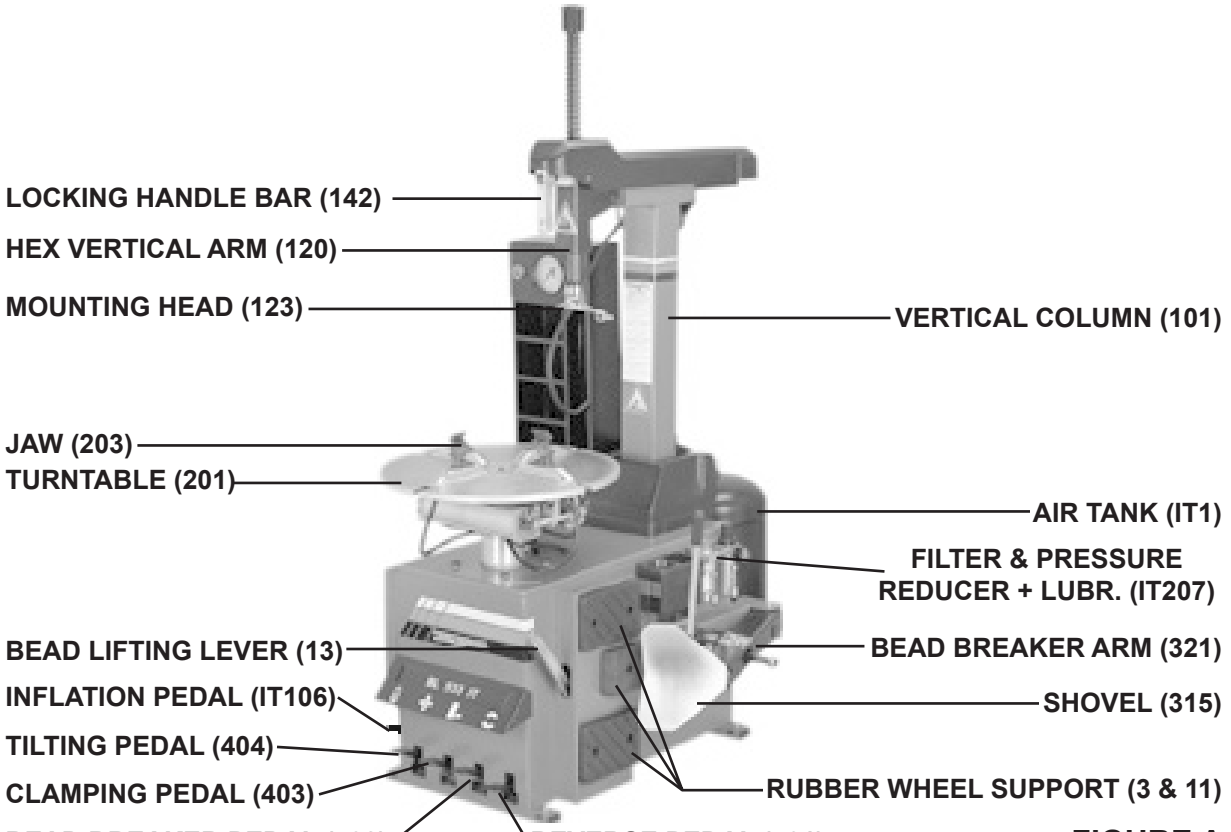


FIGURE A

7. Vertical column assembly procedure:

   1) With assistance, place the Column (1, Fig. B-1) in its seating on the Body Assembly (2, Fig. B-1). Push the Air Hose (3, Fig. B-1) through the large round hole into the body.
   2) Insert the Pin (13, Fig. B-1) through the column as shown in Fig. B-1 and fasten it with Screws (14, Fig. B-1) and Washers (15, Fig. B-1).
   3) Using the Screw (17, Fig. B-1) tighten with the Self- Locking Nut (16, Fig. B-1) to connect the Pin (18, Fig. B-1) of the post tilting cylinder.
   4) Remove the four Screws (4, Fig. B-1) from the left Side Cover (6, Fig. B-1) and remove it. Connect the Air Hose (3, Fig. B-1) from the column to the 6mm Connector (5, Fig. B-1).
   5) Replace the Side Cover (6, Fig. B-1) and fasten it with the Screws (4, Fig. B-1).
   6) Install the plastic guard and fix it with the two Cap Screws (10, Fig. B-1).

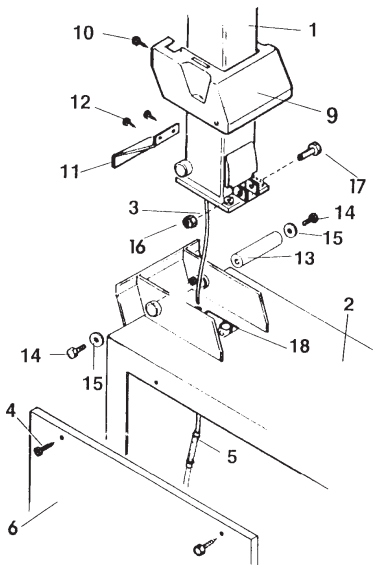


FIGURE B-1

   7) Fix the Metal Sheeting Guard (11, Fig. B-1) to the back of the vertical column (1, Fig. B-1) using the two Cap Screws (12, Fig. B-1).

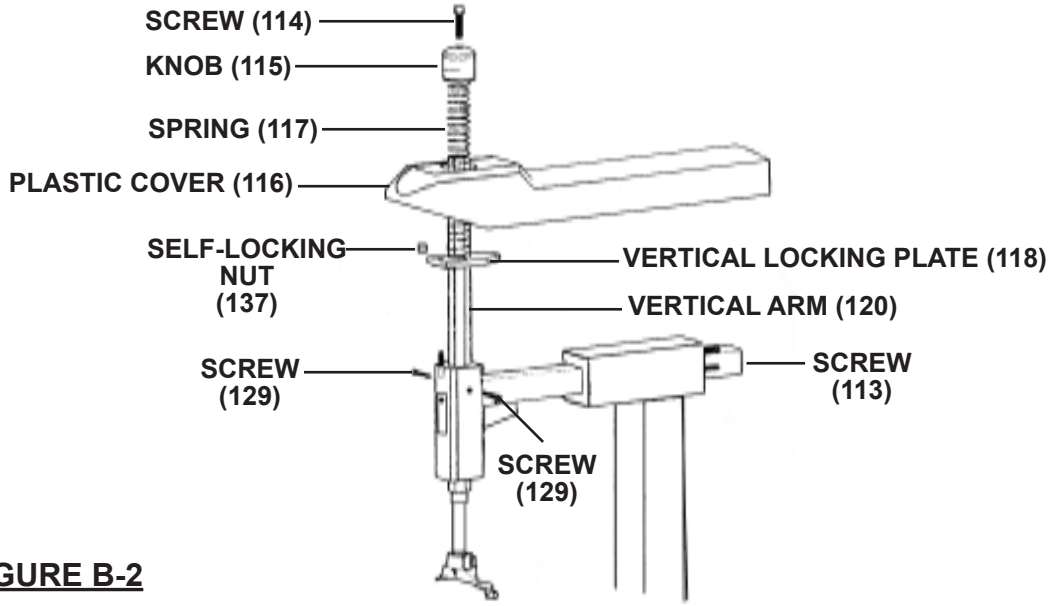


FIGURE B-2

8. Loosen the three Screws (113 & 129). Then, lift up and remove the Plastic Cover (116). **(See Figure B-2.)**

9. With assistance, slide the Vertical Arm (120) fully upward and hold. **NOTE:** You may wish to place wooden blocks under the Vertical Arm in order to keep the Vertical Arm in its upward position throughout this assembly procedure. **(See Figure B-2.)**

10. Temporarily unscrew and remove the Self-Locking Nut (137) from the Vertical Locking Plate (118). **(See Figure B-2.)**

11. Insert the Spring (117) onto the upper portion of the Vertical Arm (120), and allow the Spring to rest upon the Vertical Locking Plate (118). **(See Figure B-2.)**

12. Re-tighten the Self Locking Nut (137) into the Vertical Locking Plate (118) in order to secure the Spring (117) to the Vertical Locking Plate. **(See Figure B-2.)**

13. Insert the Knob (115) onto the upper portion of the Spring (117). Push the Knob firmly down, while compressing the Spring, until the Knob contacts the upper portion of the Vertical Arm (120). Then secure the Knob to the Vertical Arm, using the Screw (114). **(See Figure B-2.)**

⚠CAUTION! Use extreme caution when compressing the Spring (117). Compressing the Spring will cause resistance which could result in personal injury should the Spring suddenly expand. Maintain a firm grip on the Knob (115) while compressing the Spring. Firmly tighten the Screw (114) to secure the Knob to the Vertical Arm. (See Figure B-2.)

14. Re-attach the Plastic Cover (116), and re-tighten the three Screws (113 & 129). If using wooden blocks to support the Vertical Arm (120), remove the blocks. **(See Figure B-2.)**

15. **NOTE:** For shipping purposes, the Shovel (315) is restrained with a *temporary* tie-down bracket. Make sure to remove and discard the bracket. **(See Figure A.)**

16. Lay out the Tool Box (IT42) and Tool Box Support (IT38). **(See Assy. Diagram.)**

17. Attach the Tool Box Support (IT38) to the Body (1) of the Tire Changer, using the Mounting Bracket Bolts. **(See Assy. Diagram.)**

18. Attach the Tool Box (IT42) to the Tool Box Support (IT38), using the Mounting Bracket Bolts. **(See Assy. Diagram.)**

19. Remove the Left Side Cover (8) from the Body (1) to expose the inside of the Tire Changer. **(See Assy. Diagram.)**

20. Run the Hose (IT15) through the opening in the Body (1) of the Tire Changer. Then, connect the Hose to the 5-Way Valve (IT17). **(Note location in Assy. Diagram.)**

21. Re-attach the Left Side Cover (8) to the Body (1) of the Tire Changer. **(See Assy. Diagram.)**

22. *Assembly of the Tire Changer should be complete and the machine now ready to operate.* Only set up and use the Tire Changer on a flat, level surface that is capable of supporting the weight of this heavy tool (566 lb.) and all required tools and tires.

OPERATING INSTRUCTIONS

To Perform Preliminary Operating Tests:

1. Plug the Power Cord into the nearest 220 volt, grounded, electrical outlet.

2. Connect the air compressor's supply hose (not included) to the Filter & Pressure Reducer + Lubr. (IT201 thru IT205). Set the air compressor's regulator to no more than 110 PSI. Turn on the air compressor, and allow sufficient time for adequate build-up of compressed air. **(See Figure A.)**

3. Depress the Reverse Pedal (401) down. The Turntable (201) should turn in a clockwise direction. Pull the Reverse Pedal up, and the Turntable should turn counterclockwise. **(See Figure A.)**

4. Open the Bead Breaker Arm (321) manually, and depress the Bead Breaker Pedal (402). The Bead Breaker Arm will close. When the Bead Breaker Pedal is released, the Pedal should return to its original position. **(See Figure A.)**

5. Depress the Clamping Pedal (403) once to open the four Jaws (203). When the Clamping Pedal is depressed again, the four Jaws should close. **(See Figure A.)**

6. Depress the Tilting Pedal (404). The Vertical Column (101) will tilt back, bringing it to a non-working position. When the Tilting Pedal is released, the Vertical Column will return to its original working position. **(See Figure A.)**

7. Press the Button on the Locking Handle Bar (142). Both the Vertical Arm (120) and the horizontal Mounting Head Assy. (131) will be locked in position. Press the Button inside the Locking Handle Bar, and the Vertical Arm and Horizontal Mounting Head Assy. is released. **(See Figure A.)**

To Break The Tire Bead:

⚠**CAUTION!** Before carrying out this procedure, deflate the tire fully and remove all of its wheel weights.

1. Depress the Clamping Pedal (403) twice to close the four Jaws (203) completely. **(See Figure A.)**

2. Open the Bead Breaker Arm (321) manually by pushing it towards the outside. **(See Figure A.)**

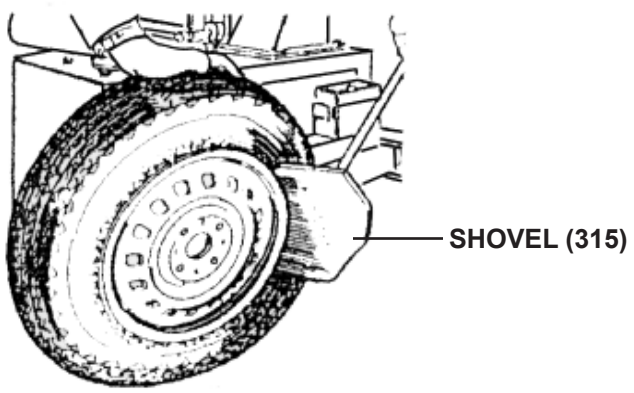


FIGURE C

3. Place the wheel up against the Rubber Wheel Support (3 & 11). Bring the Shovel (315) against the bead about four inches from the edge of the wheel rim. **(See Figures A and C.)**

4. Depress the Bead Breaker Pedal (402) to fully activate the Shovel (315). Release pressure on the Bead Breaker Pedal when the Shovel has reached the end of its travel and/or when the tire bead is broken. **(See Figures A and C.)**

5. Rotate the tire slightly, and repeat the procedure around the entire circumference of the wheel rim until the bead is completely detached from the wheel rim. **(See Figures A and C.)**

6. Repeat Steps #2 through #6 for the other side of the wheel. **(See Figure C.)**

To Demount The Tire From The Wheel:

1. **DEFLATE THE TIRE FULLY !!!** Open the bead breaker arm by hand by pushing it towards the outside. Place the wheel up against the Rubber Buffer. Bring the Paddle against the bead about 3/8" from the edge of the rim.

2. Depress the bead breaker pedal fully to activate the paddle. Release pressure on the bead breaker pedal, when the blade has reached the end of its travel and/or when the tire bead is broken. Rotate the tire slightly, and repeat the procedure around the entire circumference of the wheel rim until the bead is completely detached from the rim.

3. Depress the column tilting pedal; the column is tilted back to non-working position. Lock the wheel on the turntable by depressing the jaw clamp pedal.

4. Depress the column tilting pedal again and the vertical Arm will return to original position.

5. Position the mounting head by hand against the edge of the rim. Press the button on the handle. The vertical Arm and Horizontal Arm will be automatically locked in position; meanwhile, the mounting head will be lifted 1/16"-1/8" above the rim edge.

6. Insert the lever between the tire bead and the front section of the mounting head.

To Demount The Tire From The Wheel: (continued)

7. Then work the lever around the tire.

8. Move the tire bead over the mounting head.

9. With the lever (or hands) held in position, rotate the turntable in a clockwise direction by fully depressing the reverse pedal.

10. Continue until the tire is completely separated from the wheel rim. And remove the inner tube (if the tire has an inner tube).

11. Insert the lever between the other side of the tire bead and the front section of the mounting head. Move the tire bead over the mounting head.

12. Repeat the above steps for the other side of the tire.

To Mount The Tire Onto The Wheel Rim:

1. Depress the column tilting pedal; the column is tilted back to non-working position. Lock the wheel rim on the turntable by depressing the jaw clamp pedal.

2. Put the tire on the rim.

3. Position the mounting head by hand against the edge of the rim. Press the button on the handle. The vertical Arm and Horizontal Arm will be automatically locked in position; meanwhile, the mounting head will be lifted 1/16”-1/8” above the rim edge.

4. Move the tire so that the bead farthest away passes below the front section of the mounting head and is brought up against the edge of the rear section of the mounting head.

5. Here is how it looks from the other side.

6. Rotate the turntable in a clockwise direction by fully depressing the reverse pedal.

To Mount The Tire Onto The Wheel Rim: (continued)

7. Continue until the bead farthest away is completely onto the wheel rim.

8. Insert the inner tube (if there is one). And spread tire grease (or a similar lubricant) liberally on the complete circumference of the tire bead.

9. Move the tire so that the bead passes below the front section of the mounting head and is brought up against the edge of the rear section of the mounting head.

10. Keep the tire bead pressed down into the wheel rim channel with your hands (or the lever). Then, depress the reverse pedal to rotate the turntable clockwise.

11. Continue this process throughout the entire circumference of the wheel and tire.

12. If the tire locks up in above step, pull the reverse pedal up to rotate the turntable counterclockwise to unlock it. Check the wheel rim and the tire are of the same size. And try again.

To Mount The Tire Onto The Wheel Rim: (continued)

13. Depress the column tilting pedal; the column is tilted back to non-working position.

14. Press the inflating pedal down to the middle position to start tire inflation. Inflate the tire with brief jets of air! Checking the air pressure frequently. Once the proper air pressure has been reached, disconnect the nozzle from the valve stem and screw a valve cap onto the stem.

15. For a tubeless tire, if the bead of the tire is not well seated, due to a strong bead, lift tire manually until the upper bead seals against the rim, then press the pedal all the way down. A strong jet of air will be released through the nozzles in the slides and this will help the bead seal.

To Inflate The Tire:

1. ⚠**WARNING!** A burst tire can cause serious injury or even death to the operator or bystander. Always make sure the wheel rim and the tire are of the same size. Check the condition of the tire, and make sure it has no defects before beginning the inflation process. Keep your hands and body as far away from the tire as possible. Inflate the tire with briefs jets of air, checking the air pressure frequently. Never inflate a tire above or below the air pressure recommended by the tire manufacturer.

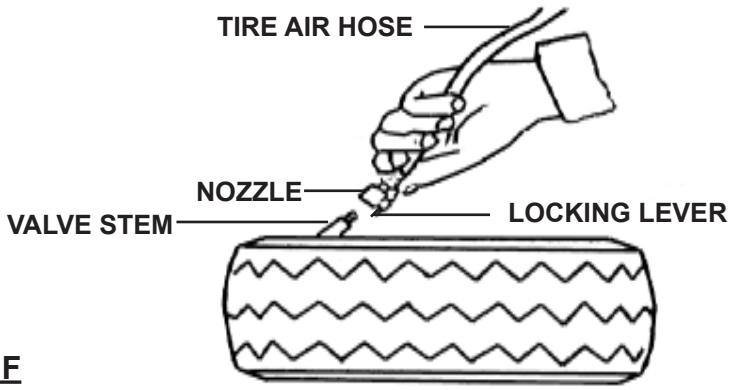


FIGURE F

2. There is an Inflation Pedal (IT106) on the left side of the Tire Changer. When the Inflation Pedal is depressed down to its *middle* position, air is released from the air hose. When the Inflation Pedal is depressed down *completely,* air is released from the inflation jet nozzles on the Turntable (201). **(See Figures A and F.)**

3. While the wheel/tire is still clamped onto the Turntable (201), depress the Inflation Pedal (IT106) completely while slightly raising and lowering the tire by hand to contact the beads on both sides of the tire with the edges on both sides of the wheel rim. Meanwhile, air is being released from the inflation jet nozzles on the Turntable, expanding the tire until the beads on both sides make complete contact with the full circumference of the wheel rim on both sides and seal the beads to the edges of the wheel rim. **(See Figures A and F, previous page.)**

4. Immediately when there is an air tight seal between the beads on both sides and wheel rims on both sides release pressure on the Inflation Pedal (IT106). **(See Figure A.)**

5. Attach the Nozzle of the air hose to the valve stem of the tire. Make sure the Locking Lever of the Nozzle is in the "UP" position to lock the Nozzle onto the valve stem. **(See Figure F.)**

6. Depress the Air Inflator Button. Depress the Inflation Pedal (IT106) down to its middle position to release air from the air hose. **(See Figures A and F.)**

7. Remember to inflate the tire with brief jets of air, checking the air pressure frequently. Once the proper air pressure has been reached, release pressure on the Inflation Pedal (IT106). Disconnect the nozzle of the air hose from the valve stem of the tire, and screw a valve cap onto the stem. **(See Figures and F.)**

8. Depress the Tilting Pedal (404) so the Vertical Column (101) will tilt back to its non-working position, release the clamping jaws and remove the wheel/tire from the Tire Changer. **(See Figure A.)**

INSPECTION AND MAINTENANCE

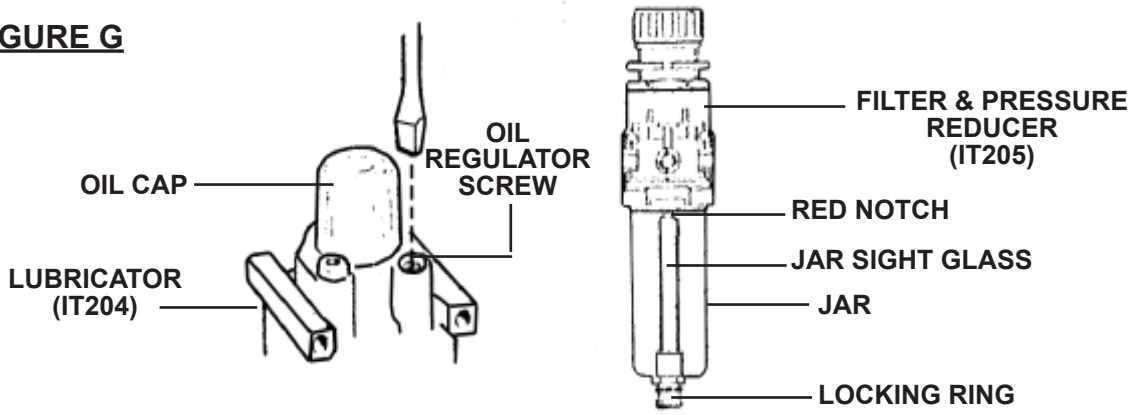
⚠**WARNING! Prior to performing any inspection or maintenance procedures, disconnect the Tire Changer from its air supply source. Pump the Bead Breaker Pedal (402) several times to evacuate all compressed air from the machine, and disconnect the unit from its electrical supply source.**

1. **Before each use:** Inspect the general condition of the Tire Changer. Check for misalignment or binding of moving parts, cracked or broken parts, damaged wiring, damaged air hoses, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use. **Do not use damaged equipment.**

2. **Daily:** Clean the machine daily to remove any dirt or tire debris from the Jaw Slides (202). Then, lubricate the Slides with grease.

3. **At least once per week:** Clean the Turntable (201) with detergent or a non-flammable solvent. Then, lubricate the Jaw Slides (202) with grease.

FIGURE G



4. **At least once per month:** Check the oil level in the Lubricator (IT204). If necessary, remove the Oil Cap. Fill the Tank with SAE 30-weight oil, and replace the Oil Cap. Also, make sure that one drop of oil is injected into the Tank every 3-4 times the Bead Breaker Pedal (402) is depressed. If necessary, regulate the rate of oil injection with the Oil Regulator Screw. **(See Figure G.)**

5. **After the first twenty days of use:** Re-tighten the Jaws Tightener (218) and the Screws (214) located on the Turntable Slides (201). **(See Assy. Diagram.)**

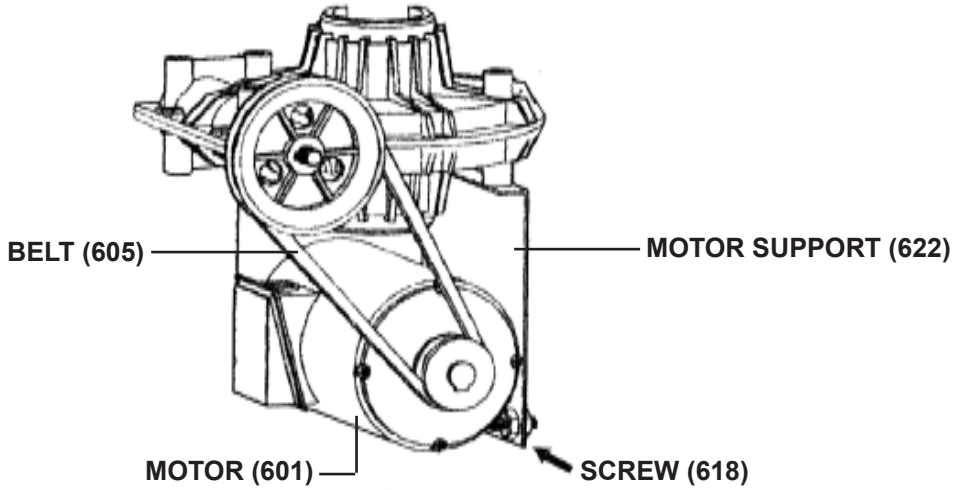


FIGURE H

6. **In the event of a loss of power:** Check to see if the Belt (605) is tight. To do so, remove the Left Cover (8) which is located on the left side of the Body (1). Regulate the Belt tension by adjusting the Screw located on the Motor Support (622). **(See Figure H.)**

7. **Daily:** Check the level of water in the Filter & Pressure Reducer (IT205). The level must never reach above the Red Notch in the Jar's Sight Glass. When necessary, drain the water by turning the Locking Ring clockwise. **(See Figure G.)**

8. **Every 30-40 days:** Dismantle the Jar to remove any solids collected inside it. **(See Figure G.)**

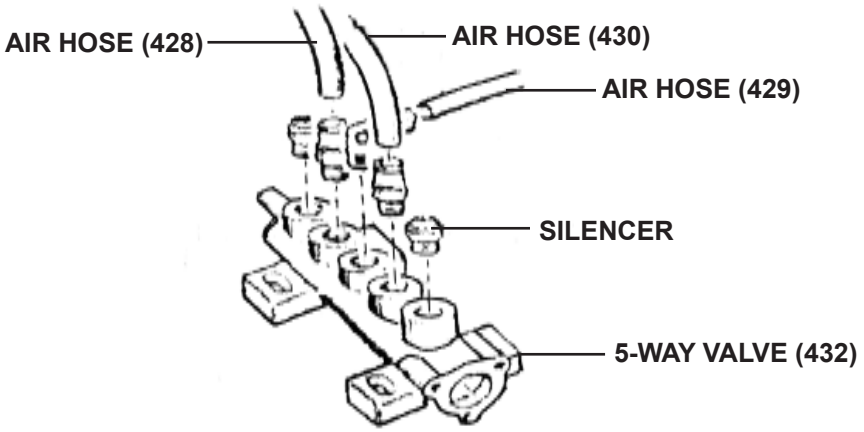


FIGURE I

9. **To clean or replace a 5-Way Valve (432):** Remove the Left Cover (8) which is located on the left side of the Body (1). Remove the Air Hoses (428, 429, 430) from the 5-Way Valve - note the locations they are removed from. Clean the 5-Way Valve, using a jet of compressed air. Or if necessary, replace the unit and reattach air hoses to 5-Way Valve. **(See Figure I.)**

TROUBLESHOOTING GUIDE

1. **Situation:**
   Turntable does not rotate.
   Possible Reasons:
   A. The Power Plug is not inserted in its electrical outlet or no power from the main electrical supply source.
   B. The Motor is malfunctioning
   C. The Reverse Pedal is broken.
   D. The Belt is loose or broken.
   Solutions:
   A. Insert the Power Plug, and reset the main electric supply source.
   B. Check for loose wires in the Motor.
   C. Check and repair entire Reverse Pedal assembly.
   D. Adjust or replace the Belt.

2. **Situation:**
   Turntable locks while mounting/removing tire.
   Possible Reason:
   The belt is loose.
   Solution:
   Adjust belt tension.

3. **Situation:**
   Jaws slow to open/close
   Possible Reason:

The silencer is clogged.
Solution:
Clean or replace the silencer.

4. **Situation:**
Turntable does not lock the wheel rim correctly.
Possible Reasons:
A. The jaws are worn.
B. Defective piston
Solutions:
A. Replace jaws
B. Replace plate cylinder gasket.

5. **Situation:**
Tool touches the wheel rim during tire mounting/demounting process.
Possible Reasons:
A. The Locking slide is incorrectly adjusted or defective.
B. The Locking slide screw is loose.
Solutions:
A. Adjust or replace the locking slide.
B. Tighten the screw.

6. **Situation:**
Bead Breaker Pedal and Jaw clamp pedal lock out of position.
Possible Reason:
Return spring of the pedal broken.
Solution:
Replace spring.

7. **Situation:**
Bead breaking operation difficult
Possible Reasons:
A. The silencer is clogged.
B. The Value shaft O-ring is broken.
C. The cylinder piston V-seal or O-ring are broken
Solutions:
A. Clean or replace the silencer.
B. Replace the O-ring.
C. Replace the V-seal or O-ring.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

PARTS LIST

No.	Code	Qt.	Description	No.	Code	Qt.	Description
1	C2330101	1	Body	136	C2330127	2	Horizontal locking cone
2	C2110106	1	Front cover	137	GB/T 1337	1	Self-locking nut M8
3	C2110108	1	Rubber wheel support (2)	138	PT06-01	1	T-union 1/8"
4	GB/T 95	4	Washer • 6	139	C2330360	1	Hose (Handle bar to locking cylinder)
5	GB/T 70	4	Screw M6×50	140	C2330360	1	Hose (tank to handle bar)
6	GB/T 95	2	Washer • 6	141	PC06-01	2	Quick connecting tube fitting
7	GB/T 70	2	Screw M6×10	142	C233012401	1	Locking handle bar
8	C2110143	1	Left cover	143	GB/T 70	4	Screw M5×12
9	GB/T 70	6	Screw M6×15	144	C2330313	1	Hose (Two locking cylinders link up)
10	GB/T 95	6	Washer • 6	145	JB 1092	2	O-ring • 70
11	C2110113	1	Rubber wheel support (1)	146	GB/T 95	1	Washer • 12
12	C211010111	4	Rubber foot	147	C233016010	4	Tightener
13	C2110158	1	Bead liftng lever	148	C233016002	1	Cylinder rod
101	C2330138	1	Vertical Column	149	GB/T 1337	8	Self-locking nut M8
102	PL06-01	1	L-union	150	C211016001	1	Front flange
103	C233011601	2	Locking cylinder piston • 48	151	JB/T 6997	1	V-seal
104	C233011603	2	C-seal 60	152	C2110106	1	Piston
				153	GB/T 1337	1	Self-locking nut M12
105	GB/T 70	4	Screw M6×40	154	C2330105	1	Cylinder casing
106	C233011602	2	Locking cylinder casing • 48	155	JSM-Z6	2	Union 1/8"
107	C2330117	1	Horizontal locking plate	156	C2110103	1	Rear flange
108	GB/T 95	2	Washer • 6	157	C233016011	1	Bell-mouthed sheath
109	C2330133	2	Horizontal locking spring	158	C233016010	2	Rubber sheath
110	C2330118	1	Arm protection support	159	GB/T 5781	2	Screw M10×15
111	GB/T 95	4	Washer • 8	160	C2330159	2	Washer • 10
112	GB/T 93	4	Spring washer • 8	161	GB/T 41	2	Nut M10
113	GB/T 70	1	Screw M8×20	162	GB/T 1337	1	Self-locking nut M12
114	GB/T 70	1	Screw M8×40	163	GB/T 5781	2	Screw M10×15
115	C2110132	1	Knob	164	GB/T 95	1	Washer • 10
116	C2330129	1	Plastic cover	165	GB/T 27	1	Hinged bolt
117	C2110131	1	Spring	166	C2330140	1	Tilting pin
118	C2330130	1	Vertical locking plate	167	GB/T 5781	2	Screw M10×15
119	C2330126	1	Horizontal arm	168	C2330164	1	Plastic cover
120	C2110125	1	Hexagonal vertical arm	169	C2330128	1	Plastic cover
121	C2110124	1	Buffer Bushing	170	C2330119	1	Complete tilting cylinder
122	C211012302	1	Pulley	171	C2330116	2	Complete Locking cylinder
123	C2110124	1	Mouting Head	172	C233016009	1	Rubber sheath
124	GB/T 119	1	Pin	173	C233016004	1	Cover
125	GB/T 78	1	Screw M10×25	174	GB/T894	1	Seeger ring
126	GB/T 95	1	Washer • 10	178	GB/T95	2	Washer 6
127	GB/T 80	1	Screw M12×15	179	C233016007	1	Sheath Support
128	C2330134	1	Shock absorber	180	C233016008	1	Rubber sheath
129	GB/T 950	2	Screw M6×10				
130	C2330131	2	Spacer • 6	201	C2110122	1	Turntable
131	C2110123	1	Complete mounting head	202	C2110145	4	Slide
132	GB/T 1337	1	Self-locking nut M8	203	C2110144	4	Jaw
133	GB/T 95	1	Washer • 8	204	C2110120	1	Turntable washer
134	GB/T 1337	2	Self-locking nut M12	205	GB/T 5781	1	Screw M16×20
135	GB/T 95	2	Washer • 12	206	C2110163	1	Cap

PARTS LIST, CONTINUED

207	C2110147	1	Control plate	325	GB/T 95	2	Washer φ12
208	C2110120	1	Washer	326	GB/T 5287	1	Washer φ8
209	GB/T 894	1	Circlip φ65	327	GB/T93	1	Spring washerφ8
210	C2110150	4	Connecting rod	328	GB/T 5783	1	Screw M8×15
211	C2110121	2	Slide guide with pin	329	C2110108	1	Cushion
212	GB/T 95	4	Washer φ12	330	C2110104	1	Spring
213	GB/T 894.1	4	Circlip φ12	331	C2110109	2	Screw M12X20
214	GB/T 80	4	Screw M12×85	332	C211010608	1	Washer φ12
215	GB/T 95	4	Washer φ12	333	GB/T6173	1	Nut M12X1.25
216	C211012101	2	Slide guide	334	GB/T5781	12	Screw M6X16
217	C2110148	4	Flat spacer for chuck	335	JSM-L-Z6	1	L-union 8-1/4"
218	C211011904	8	Tightener	336	C2110106A	1	Complete bead breaker cylinder
219	C211011902	2	Cylinder rod				
220	C211B011901	2	Front flange	401	C211011202	1	Reverse pedal
221	PC08-01	2	Union 8-1/8"	402	C211011201	1	Bead breaker pedal
222	JB/T 6997-BC	2	V-seal	403	C2110112011	1	Clamping pedal
223	JB1092-BC	4	O-ring φ71X2.65	404	C2110112012	1	Tilting pedal
224	C211B011906	2	Piston φ75	405	GB/T 894.1	1	Seeger ring φ12
225	GB/T 95	2	Washer φ12	406	GB/T 95	2	Washer φ12
226	GB/T 1337	2	Nut M12	407	GB/T 1337	2	Self-locking nut M8
227	C211011905	2	Cylinder casing	408	GB/T 95	2	Waher φ8
228	GB/T 41	16	Washer φ8	409	C211011210	2	Cam connecting rod
229	GB/T 95	16	Nut M8	410	C211011208	1	Pedals support
230	C211B011903	2	Rear flange	411	C211011211	3	Spring
231	C2110019	2	Complete clamping cylinder	412	C211011209	2	Cam
232	PL08-01	2	L-union 8-1/8"	413	C211011216	2	Flat spring
235	GB/T 70.1-2000	8	Bolt M8×15	414	GB/T 41	12	Nut M6
236	C211.TC-421.02A	1	Shaft sleeve	415	GB/T 70	12	Screw M6×20
				416	GB/T 95	12	Screw M6X20
301	C2110353	1	Union 8-1/4"	417	QXS-L8	6	Washer M6
302	C211010607	1	Washer φ12	418	PL08-01	7	Silencer 1/8"
303	C211010603A	1	Bead breaker cylinder casing	419	GB/T 845	4	Cap screw ST2.9X5
304	GB/T 1337	1	Self-locking nut M12	420	GB/T 70	4	Screw M6X20
305	GB/T 95	1	Washer φ12	421	C233011215	2	Cam cover
306	JB1092	1	O-ring φ16	422	C2110361	1	Hose (valve to clamping cylinder)
307	GB/T 95	1	Washer φ14	423	C2110361	1	Hose (5-way union to valve)
308	JB1092	2	O-ring φ180	424	C2110361	1	Hose (valve to clamping cylinder)
309	C211010606	1	Bead breaker cylinder lid (front)	425	C2110361	1	Hose (valve to tilting cylinder)
310	C211010601	1	Bead breaker cylinder rod	426	C2110361	1	Hose (5-way union to valve)
311	JB/T 1091	2	V-seal	427	C2110361	1	Hose (valve to tilting cylinder)
312	C211010602	1	Piston	428	C2110361	1	Hose (valve to bead breaker cylinder)
313	GB/T 41	12	Nut M6	429	C2110361	1	Hose (5-way union to valve)
314	GB/T93	12	Spring washerφ6	430	C2110361	1	Hose (valve to bead breaker cylinder)
315	C2110114	1	Shovel	432	C211011220	1	5-way valve
316	C2110111	1	Bead breaker arm pin (front)	433	GB/T 70	12	Screw M6×20
317	GB/T 1337	1	Self-locking nut M16	434	GB/T95	2	Washer φ6
318	GB/T 96	1	Washer φ16	435	C211011207	1	Switch lever
319	GB/T 894.1	1	Circlip φ16	436	GB/T 1337	2	Self-locking nut M6
320	GB/T 96	1	Washer φ16	437	C233011206	1	Connecting rod
321	C2110105	1	Bead breaker arm	438	GB/T 1337	2	Self-locking nut M6
322	C2110142	1	Bead breaker arm pin (rear)	439	C233011218	1	Spring support
323	C2110168	1	Rotating pin	440	GB/T95	2	Washer φ6
324	GB/T 1337	1	Self-locking nut M12	441	GB/T 70	2	Screw M6×15

PARTS LIST, CONTINUED

442	C233011213	1	Pedals shaft
443	GB/T 41	1	Nut M6
444	GB/T 70	1	Screw M6×40
445	C211011213	1	Twist-spring
446	GB/T 95	2	Washer C 6
447	GB/T 973	3	Screw M5×40
448	GB/T 1337	3	Self-locking nut M5
449	GB/T 95	3	Washer C 5
450	GB/T 70	1	Screw M5×40
451	489244250019	2	Complete 5-way valve
452	PK8	1	5-way union
453	C2110361	1	Hose (5-way union to locking cylinder)
454	C2110361	1	Hose(input to 5-way union)
455	PG08-06	1	Union
456	NSE08-01	2	Adjust valve
457	489244250046	1	Complete 5-way valve
501	C211015203	1	Bottom cover
502	GB/T 297	2	Roller bearing 30204
503	GB/T 10708	1	V-seal
504	C211015207	1	Gear box pulley
505	GB/T 41	1	Nut M10
506	GB/T 1096	1	Key 6×20
507	C211015206	1	Worm screw
508	GB/T 292	2	Bearing 7010
509	C211015202	1	Worm gear shaft
510	C211015201	1	Worm gear
511	C211015208	1	Spacer
515	GB/T 70	10	Screw M10×18

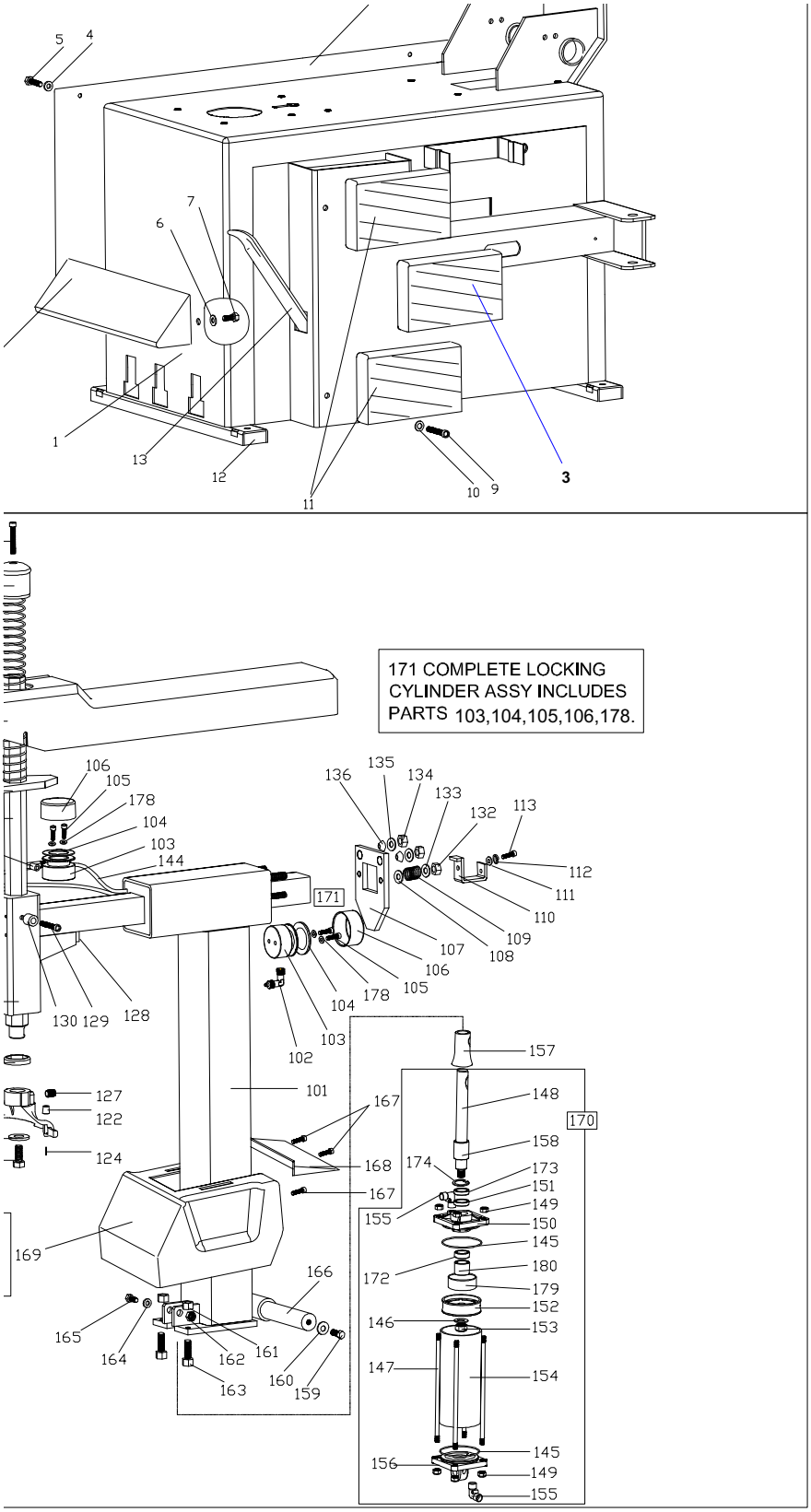
516	GB/T95	10	Washer f 10
517	C211015203	1	Upper cover
518	GB/T 1096	1	Key 10×40
519	GB/T 1096	1	Key 14×40
520	JB1092	2	O-ring f 34
521	C211015205	1	Plastic cap
522	GB/T 1337	10	Self-locking nut M8
529	C2110152	1	Complete Gearbox
601	C2110201	1	Motor MY8024
602	GB/T 1096	1	Key 6 ×20
603	C2110141	1	Motor pulley
604	GB/T 712	1	Screw M6×10
605	GB/T 11544	1	Belt A26”
606	C2110211	1	Cable (switch to motor)
607	C2110212	1	Cable (switch to capacitor)
608	C2110202	1	Capacitor
609	C2110213	1	Cable
613	IEC947-3	1	Reverse switch
614	C2110154	2	Shock absorber washer
615	GB/T95	2	Washer C 8
616	GB/T 93	2	Spring washer
617	GB/T 70	2	Screw M8×20
618	GB/T 70	2	Screw M8×50
619	GB/T 41	8	Nut M8
620	C2110154	2	Shock absorber washer
621	C2110154	8	Shock absorber washer
622	C2110110	1	Motor Support
623	C202011217	1	Switch Jacket

PARTS LIST, CONTINUED

No.	Code	Qt'y	Description
IT1	I2110301	1	Tank
IT2	PQ-L10	1	Safety valve
IT3	I2330341	1	Hose (tank to quick exhaust)
IT4	I2110312	1	Hose (input to quick exhaust)
IT5	PT08-01	1	T-union 1/8"
IT6	KP-L25	1	Complete quick exhaust valve
IT7	C233030104	1	Tie-in
IT8	I21103011702	1	Rotating valve casing
IT9	I2110313	4	Hose (Rotating union to slide)
IT10	PC08-01	3	Union 1/8"
IT11	I211011701	1	Rotating union mandrel
IT12	C211011704	4	O-ring C65x2.65
IT13	PC12-04	2	Connector 1/2"
IT14	I2110314	2	Hose (exhaust to Rotating union)
IT15	I2110315	1	Hose (5-way to IT)
IT16	C211011220	1	Hose (5-way to air input)
IT17	I2110316	1	5-way valve
IT18	I2110317	1	Hose (5-way to quick exhaust)
IT19	PC08-01	1	L-union 1/8"
IT20	JSM-3T-Z6	2	T-union
IT21	C2110327	1	Solenoid hose
IT22	GB/T41	4	Nut M6
IT23	GB/T5781	4	Screw M6
IT24	GB/T5781	2	Screw M10
IT25	GB/T41	2	Nut M10
IT26	GB/T41	2	Spring washer
IT27	GB/T 42	2	Washer
IT28	PL12-04	2	Angle connector 1/2"
IT29	I233030303	2	Tie-in
IT30	I233030304	1	T-Union
IT31	I233030301	1	Quick exhaust valve support
IT32	I233030305	1	Union
IT33	I233030302	1	Union
IT34	I233030103	1	Union
IT35	I233030105	1	L-Union
IT36	I233030106	2	Nip
IT37	GB/T5781	3	Screw M8
IT38	C2110167	1	Tools box support
IT39	C211016504	1	T Union
IT40	I2330340	1	Air manometer
IT41	GB/T5781	6	Screw M5
IT42	C2110165	1	Tool box

No.	Code	Qt'y	Description
IT43	MOV-03A	1	Exhaust valve
IT44	PL08-01	1	L-Union 1/8"
IT45	489244292005	1	Connecting block
IT46	PC10-02	8	Connector 1/4"
IT47	GB/T5781	3	Screw for fixing air manometer
IT48		2	Hose (rotating union to rear flange of clamping cylinder)
IT49		2	Hose (rotating union to front flange of clamping cylinder)
IT50	IT2110117	1	Complete rotating union
IT51	C211033002	1	Air outlet hose for IT version
IT52		1	Hose
IT53	489244292202	1	Front cover
IT60	I2110164	1	Complete IT box
IT101	I2110101	1	Inflation pedal support
IT102	GB/T 1239.6	1	Spring
IT103	GB/T 50	1	Washer 8
IT104	GB/T 5780	1	Bolt M8×30
IT105	I2110102	1	Pedal lever
IT106	I2110103	1	Inflation pedal
IT107	I2110104	1	Connecting rod
IT108	GB/T 5780	1	Bolt M4×20
IT109	GB/T 50	1	Washer 4
IT110	GB/T 1337	1	Self-locking nut M4
IT111	GB/T 70	1	Screw M6×20
IT112	GB/T 1337	1	Self-locking nut M6
IT113	GB/T 50	1	Washer 6
IT114	GB/T 70	1	Screw M8×25
IT115	GB/T 68	1	Screw M8×25
IT116	GB/T5781	4	Screw M10X70
IT117	GB/T 1239.6	1	Spring
IT118	GB/T 5780	1	Bolt M4×20
IT119	GB/T41	1	Nut M10
CIP	489244290030	1	Complete inflation pedal
IT201	JSM-3T-8	1	T-union 1/4"
IT202	C2110351	1	Union 1/4"
IT203	JSM-L-Z6	1	L-union 1/4"
IT204	C2110331	1	Lubricator
IT205	C2110332	1	Filter and pressure reducer
IT206	C2110333	1	Pressure gauge
IT207	200-03-03	1	Filter and pressure reducer + lubr.

ASSEMBLY DRAWING



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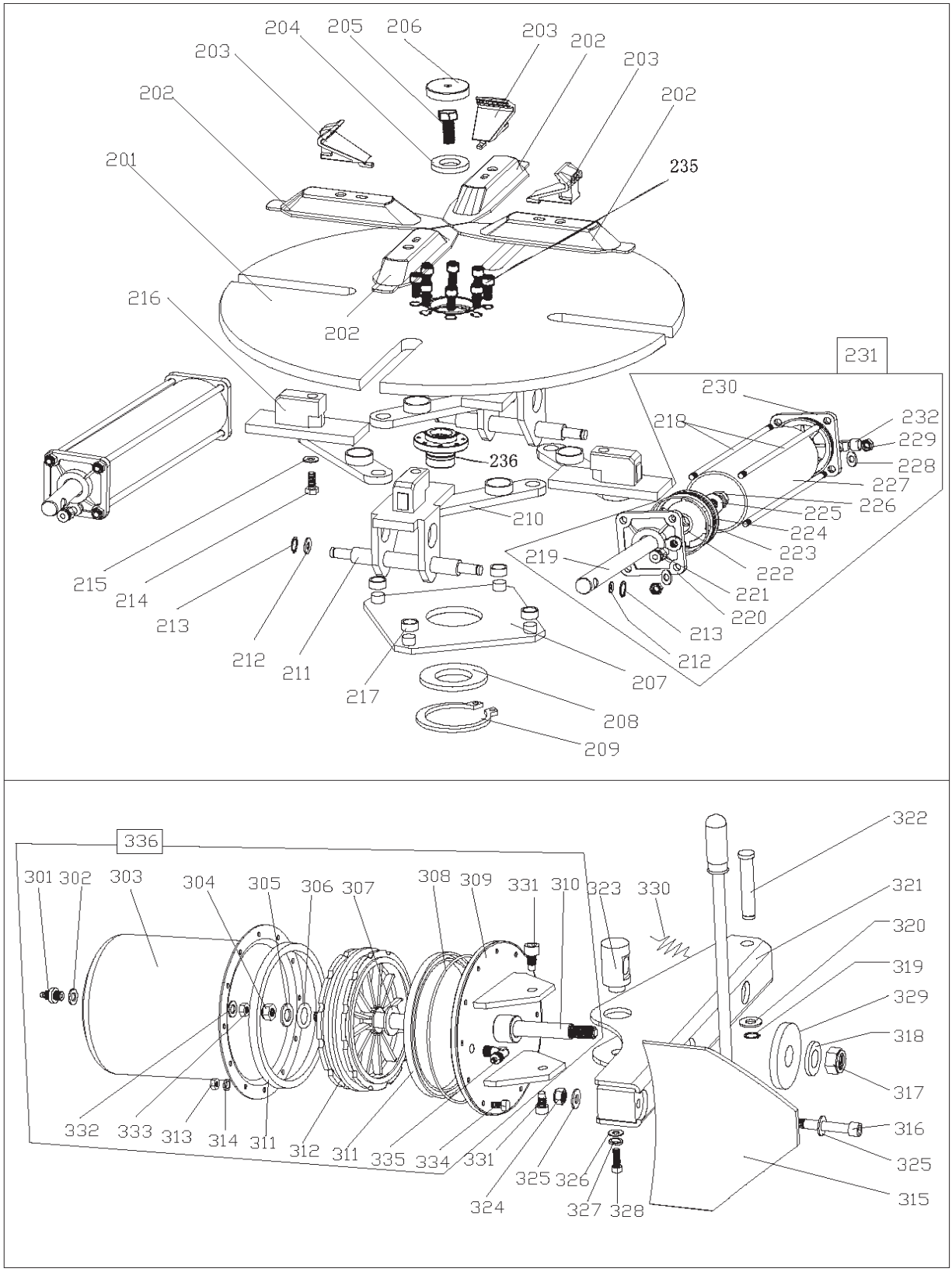

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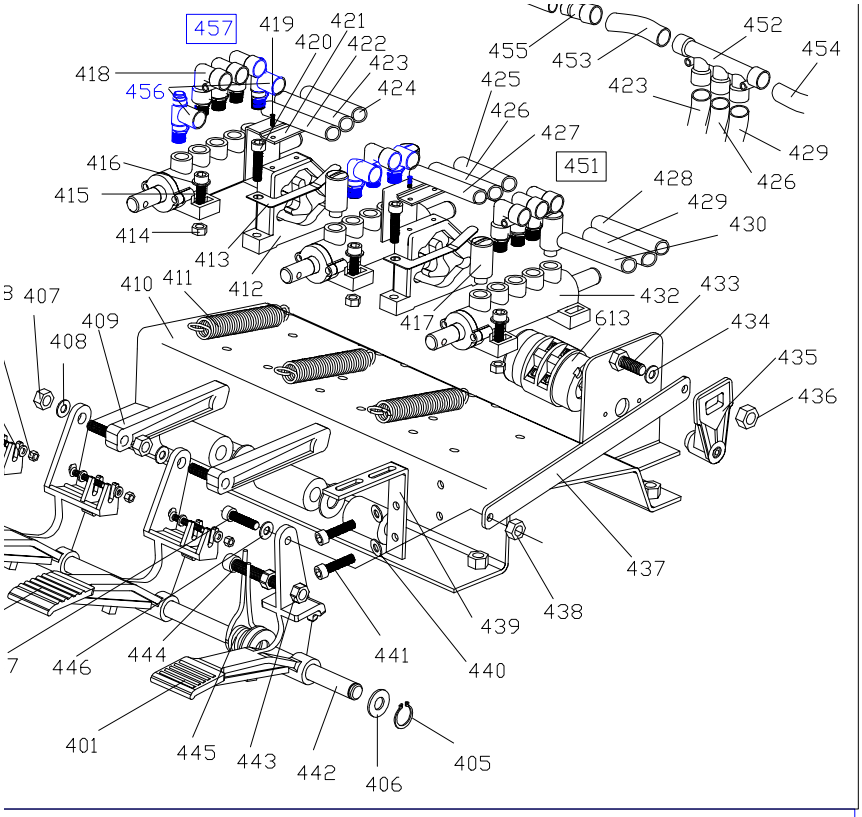

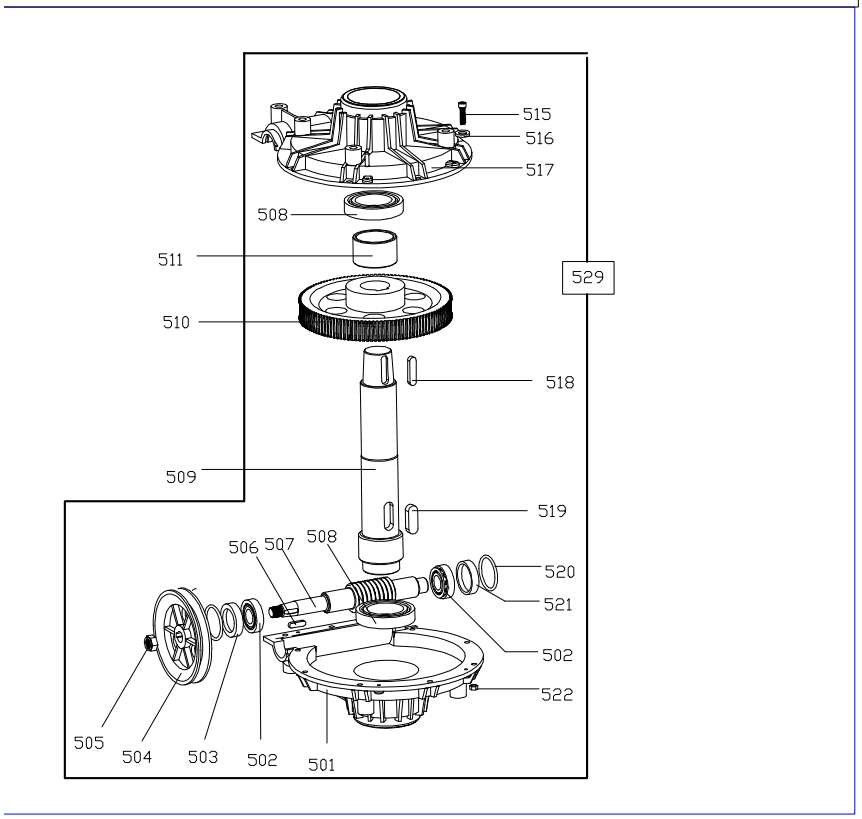

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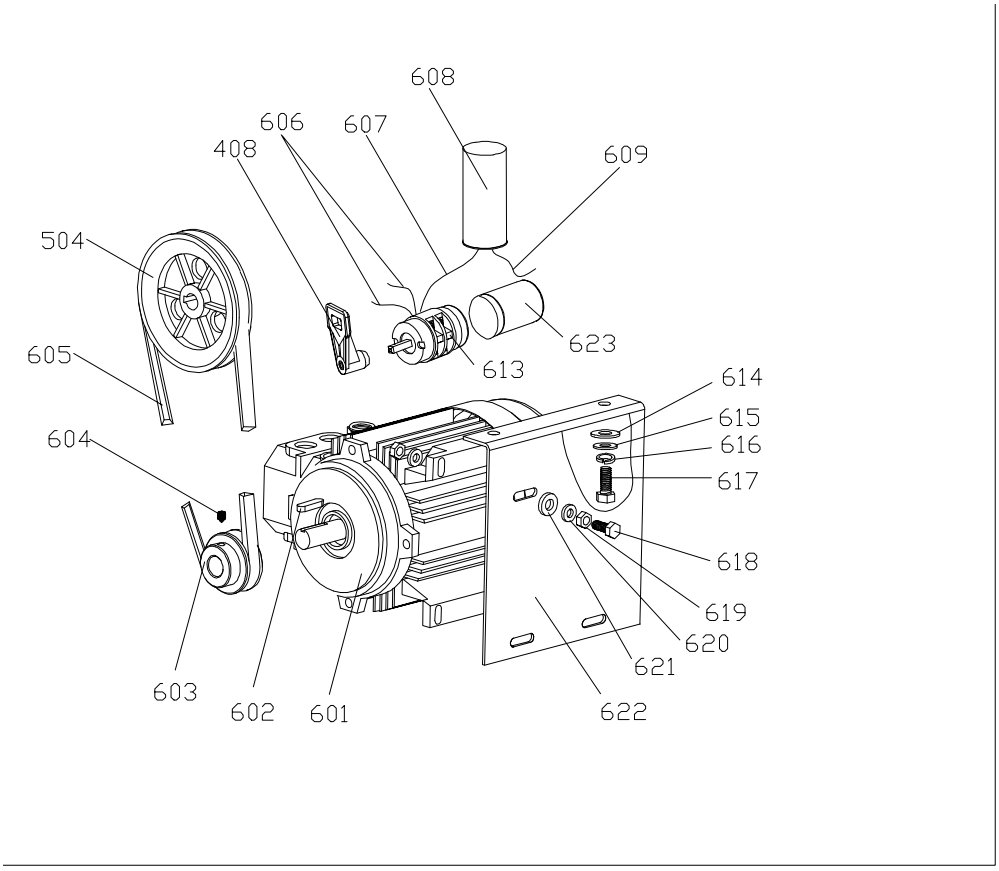
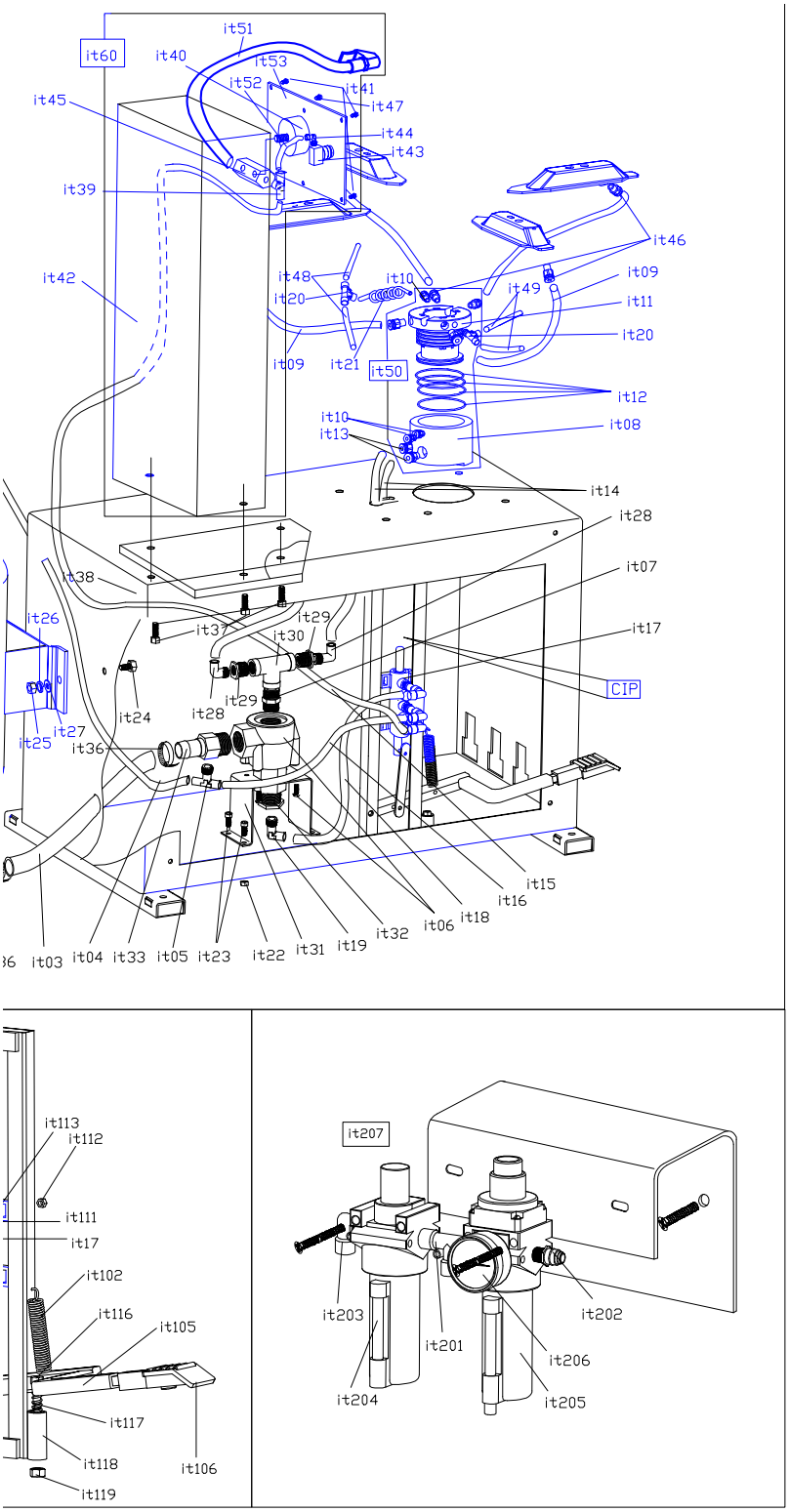


Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

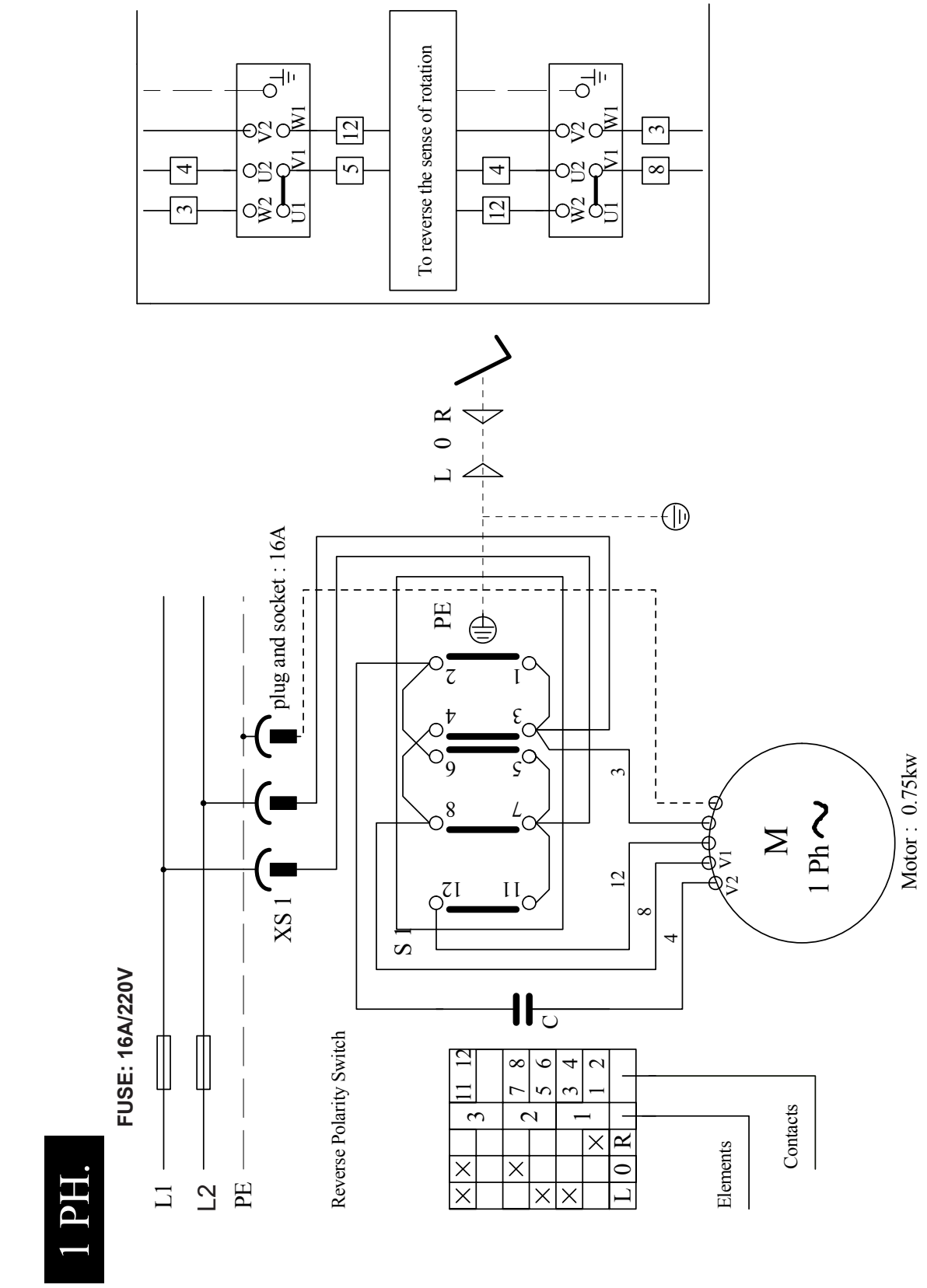
ASSEMBLY DRAWING, CONTINUED



Note: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

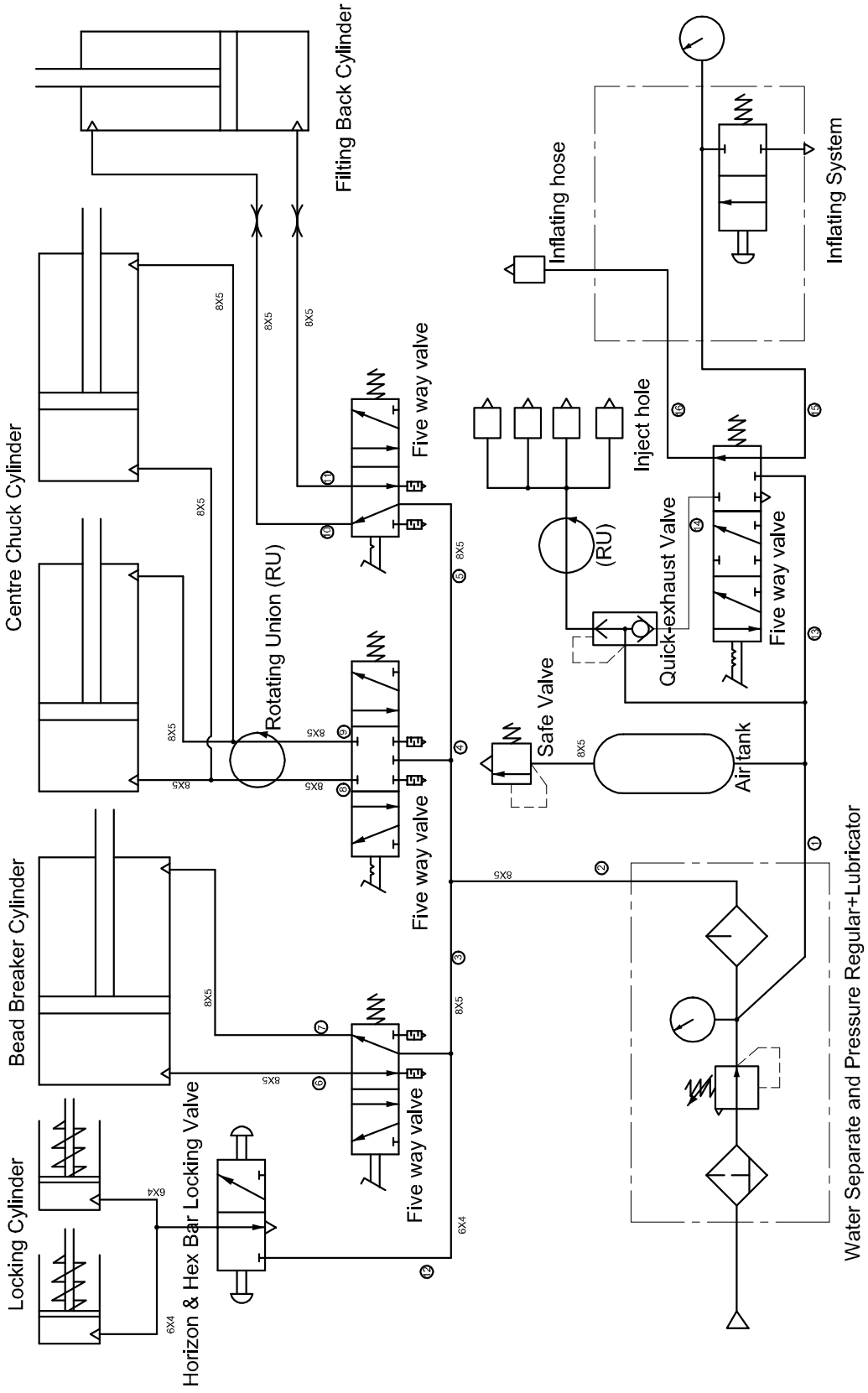
REV 07g

ELECTRICAL SCHEMATIC



REV 07k

PNEUMATIC SCHEMATIC



LIMITED 1 YEAR / 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that for a period of ninety days from date of purchase that the engine/motor, the belts (if so equipped), and the blades (if so equipped) are free of defects in materials and workmanship. Harbor Freight Tools also warrants to the original purchaser, for a period of one year from date of purchase, that all other parts and components of the product are free from defects in materials and workmanship (90 days if used by a professional contractor or if used as rental equipment). This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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